

FIG. 1

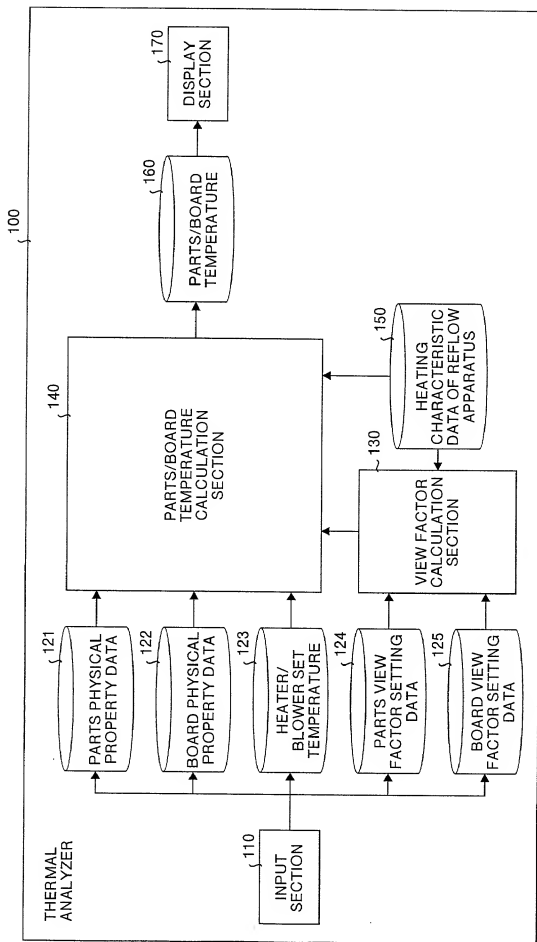
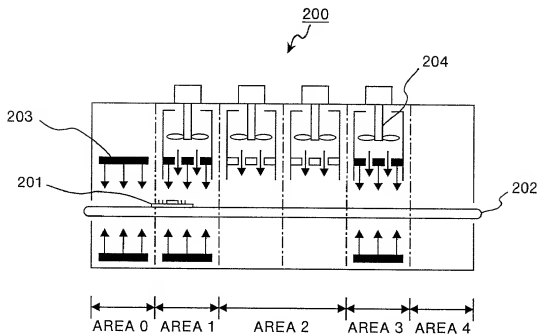


FIG.2



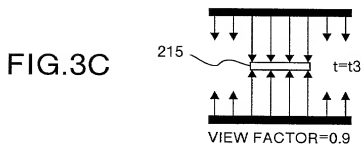
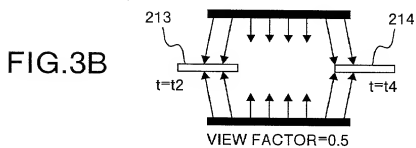
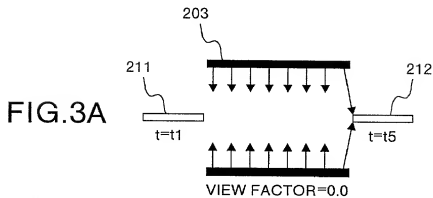


FIG.4

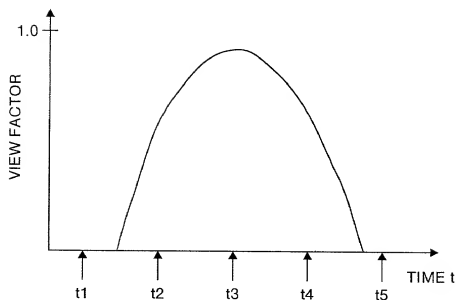


FIG.5

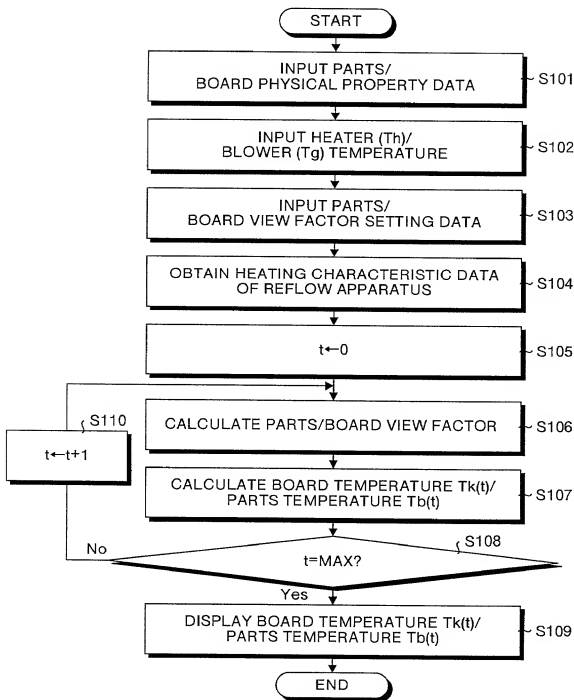


FIG.6

SET VALUE INPUT

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	AREA 1	AREA 2	AREA 3
BOLTZMANN'S CONSTANT $\sigma$	5.67E-08		
HEAT TRANSFER COEFFICIENT $\alpha$	2.50E-01	2.50E-01	2.50E-01
EMISSIVITY OF BOARD Emb	9.00E-01		
EMISSIVITY OF PARTS Emb	9.50E-01		
BOARD AREA S1	1.00E-01		
PARTS AREA S2	1.60E-03		
HEAT CAPACITY OF BOARD Ck	1.86E+02		
HEAT CAPACITY OF PARTS Cb	5.95E+00		
VIEW FACTOR OF BOARD Fk	—	—	—
VIEW FACTOR OF PARTS Fb	—	—	—
HEATER TEMPERATURE Th	423	0	588
BLOWER TEMPERATURE Tg	413	433	483

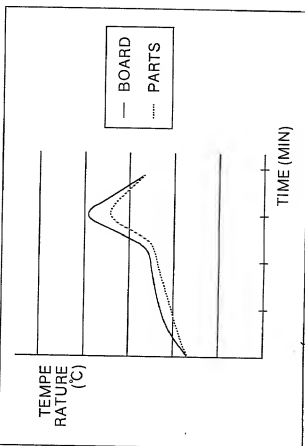
ANALYSIS RESULTS

	AFTER 41 SECONDS	AFTER 130 SECONDS	AFTER 171 SECONDS
BOARD TEMPERATURE Tk	108.6	131.32	197.3
PARTS TEMPERATURE Ttb	97.0	125.4	176.1
TEMPERATURE DIFFERENCE BETWEEN BOARD AND PARTS	11.61	5.95	21.21

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BOARD  $f(t, Tk(t)) = k_1 \cdot (Th^4 - Tk(t)^4) + k_2 \cdot (Tg - Tk(t))$   
 $k_1 = \sigma \cdot (S1 \cdot S2) \cdot Emb \cdot F/Ck$      $k_2 = \alpha \cdot (S1 \cdot S2)/Ck$

PARTS  $f(t, Ttb(t)) = k_1 \cdot (Th^4 - Ttb(t)^4) + k_2 \cdot (Tg - Ttb(t))$   
 $k_1 = \sigma \cdot S2 \cdot Emb \cdot F/Cb$      $k_2 = \alpha \cdot S2/Cb$

TEMPERATURE  
(°C)

TIME (MIN)

303

FIG. 7

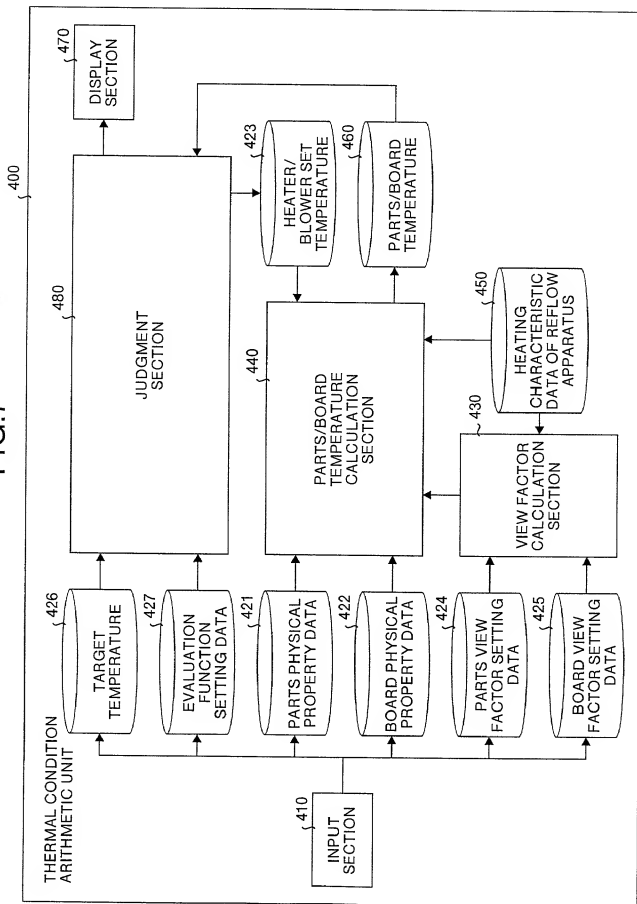


FIG.8

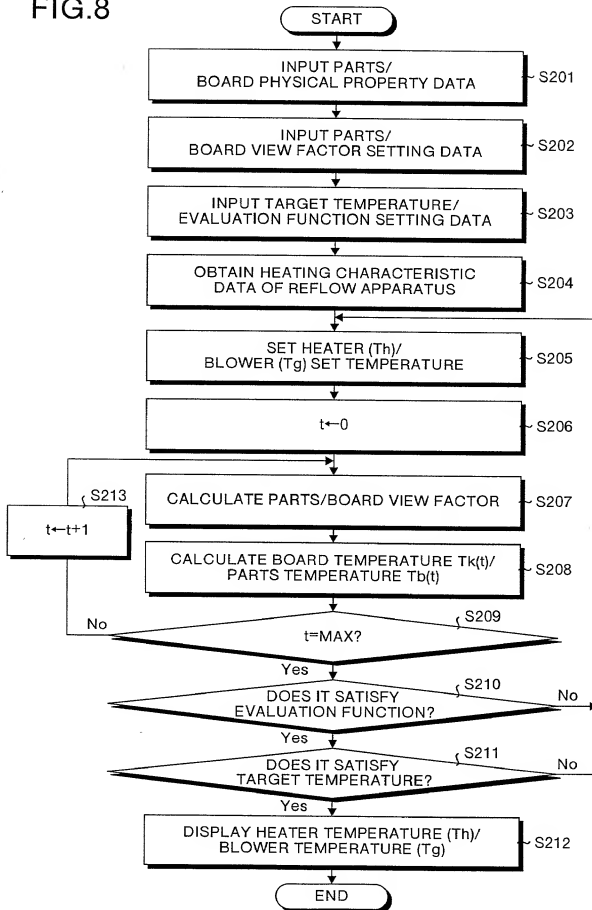




FIG.9

SET VALUE INPUT

501

	AREA 1	AREA 2	AREA 3
BOLTZMANN'S CONSTANT $\sigma$	5.67E-08		
HEAT TRANSFER COEFFICIENT $\alpha$	2.50E-01	2.50E-01	2.50E-01
EMISSIONIVITY OF BOARD Emb	9.00E-01		
EMISSIONIVITY OF PARTS Emb	9.50E-01		
BOARD AREA S1	1.00E-01		
PARTS AREA S2	1.60E-03		
HEAT CAPACITY OF BOARD Ck	1.86E+02		
HEAT CAPACITY OF PARTS Cb	5.95E+00		
VIEW FACTOR OF BOARD Fk	—	—	—
VIEW FACTOR OF PARTS Fb	—	—	—

	AFTER 41 SECONDS	AFTER 130 SECONDS	AFTER 171 SECONDS
BOARD TEMPERATURE Tk	88.7	120.27	191.9
PARTS TEMPERATURE Ttb	70.3	110.7	191.9
TEMPERATURE DIFFERENCE BETWEEN BOARD AND PARTS	18.46	9.58	0.00

CALCULATION RESULTS

	AREA 1	AREA 2	AREA 3
HEATER TEMPERATURE Th	423	0	773.20108
BLOWER TEMPERATURE Tg	413	433	240.17363

502

BOARD  $f(t, Tk(t)) = k_1 \cdot (Th^4 - Tk(t)^4) + k_2 \cdot (Tg - Tk(t))$ 

$$k_1 = \sigma \cdot (S1 - S2) \cdot Emb \cdot F/Ck \quad k_2 = \alpha \cdot (S1 - S2)/Ck$$

PARTS  $f(t, Ttb(t)) = k_1 \cdot (Th^4 - Ttb(t)^4) + k_2 \cdot (Tg - Ttb(t))$ 

$$k_1 = \sigma \cdot S2 \cdot Emb \cdot F/Cb \quad k_2 = \alpha \cdot S2/Cb$$

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TEMPER  
ATURE  
(°C)— BOARD  
..... PARTS

TIME (MIN)

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FIG.10

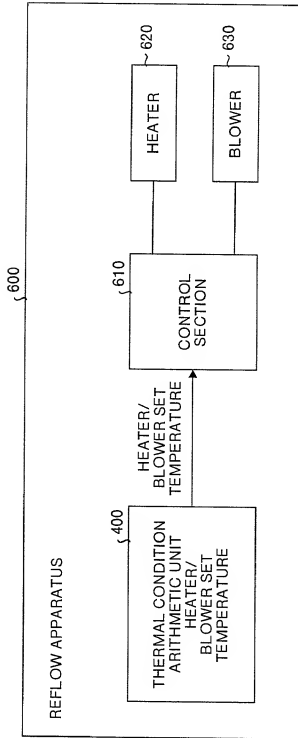


FIG.11A

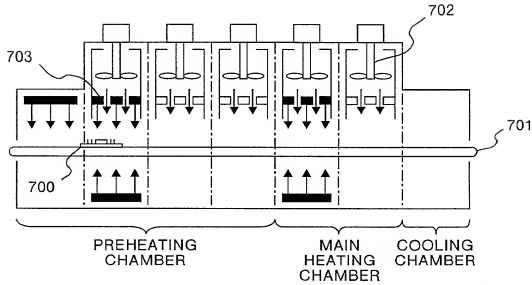


FIG.11B

